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Application Note

Identification of technical analysis patterns with smoothing splines for bitcoin prices

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ABSTRACT

This research studies automatic price pattern search procedure for bitcoin cryptocurrency based on 1-min price data. To achieve this, search algorithm is proposed based on nonparametric regression method of smoothing splines. We investigate some well-known technical analysis patterns and construct algorithmic trading strategy to evaluate the effectiveness of the patterns. We found that method of smoothing splines for identifying the technical analysis patterns and that strategies based on certain technical analysis patterns yield returns that significantly exceed results of unconditional trading strategies.

KEYWORDS:

Algorithmic trading strategy bitcoin cryptocurrency smoothing splines technical analysis patterns

pattern recognition

Disclosure statement

No potential conflict of interest was reported by the authors.

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